

INFALLIBLE I.Q. TEST

Place the correct term in the space provided. You have 5 minutes.

1. That which Noah built.
2. An article for serving ice cream.
3. What a bloodhound does in chasing a woman.
4. An expression to represent the loss of a parrot.
5. An appropriate title for a knight^{named} Koll.
6. A sunburned man.
7. A tall coffee pot perking.
8. What one does when it rains.
9. A small dog sitting in a refrigerator.
10. What a boy on the lake does when his motor won't work.
11. What do you call a person who wrote for an Inn?
12. What the captain said when the boat was bombed.
13. What the little acorn says when he grows up.
14. What one does to trees that are in the way.
15. What you do if you have yarn and needles.
16. Can George Washington become a state?
17. What do you call a bull that has a bomb inside?

Perpendicular

Cosecant

Geometry

Inscribe

Coincide

Circle

Decagon

Axiom

Arc

Center

Polygon

Unit

Hypotenuse

Tangent

Hero

Abominable

Cone

Answer Sheet

1.	Arc
2.	Cone
3.	Center
4.	Polygon
5.	Circle
6.	Tangent
7.	Hypotenuse
8.	Coincide
9.	Perpendicular
10.	Hero
11.	Inscribe
12.	Decagon
13.	Geometry
14.	Axiom
15.	Unit
16.	Cosecant
17.	Abominable

How many ways can you represent or say.....

Addition	Subtraction	Fraction
+ plus add Increase give More Positive Growing Find sum And	- subtract missing Decrease Minus Extract Eject Less than Going down Negative Smaller	$\div \frac{1}{2}$ Out of Divided by Ratio Half Part of Numerator Denominator Decimal
Division	Multiplication	Decimal
\div Divide dividend Divisor Split Remainder Fraction 45/5 Make equal parts $\sqrt{\quad}$ Factor of	Multiply $\cdot \times 5(10) *$ Times Product Triple Double Multiple of	1.5 Tenths, hundredths, etc And Fraction Percent (hundredth) Part of
Equal	Percent	
Equivalent Sum Product Quotient Ratio $\frac{1}{2} = \frac{2}{4}$ In all Answer total is	Percentage % Hundredth .01 Pie chart/graph Per hundred Out of hundred Fraction Part of	

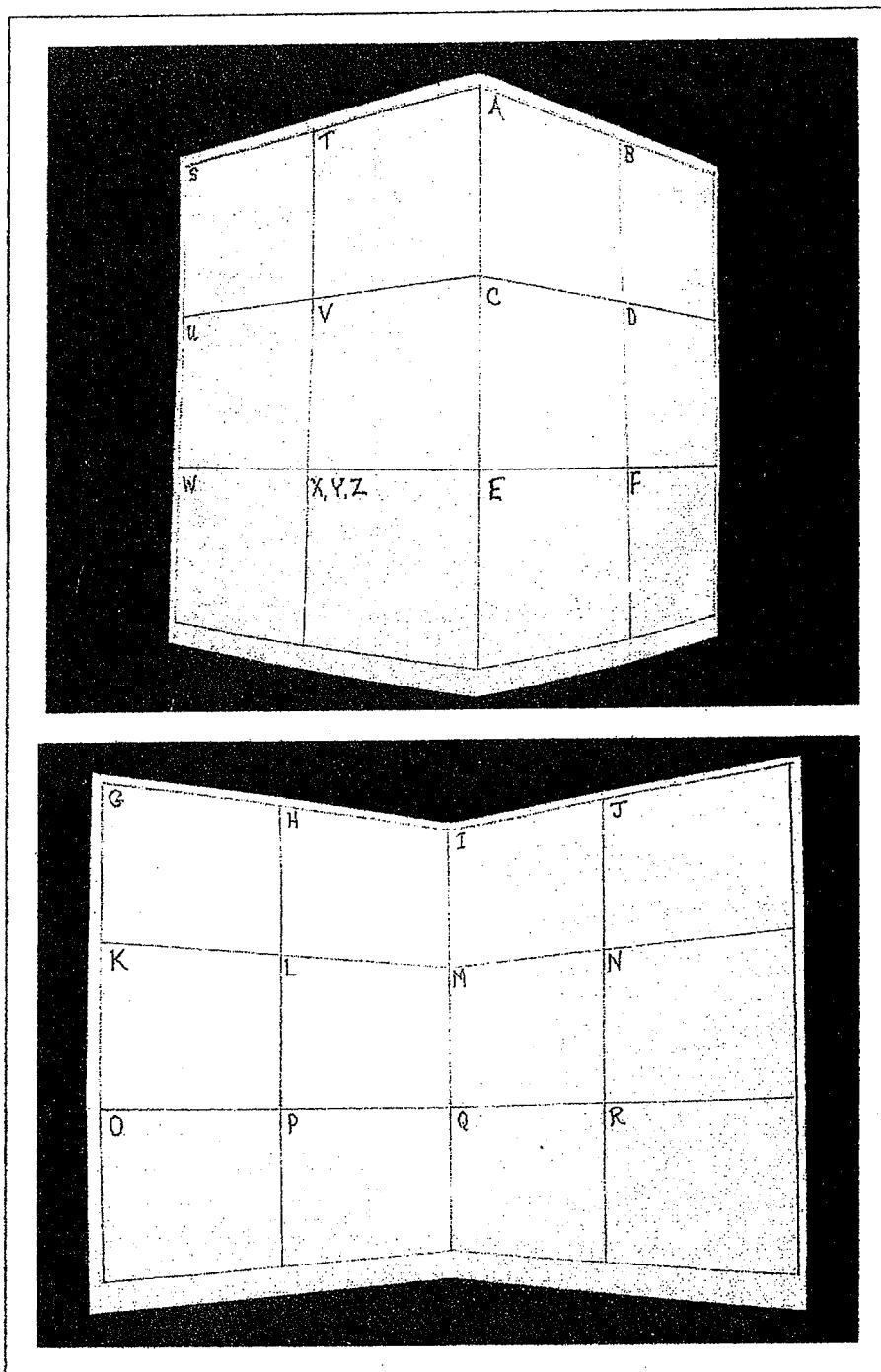


FIGURE 1-4 Individual Student "Word/Wall" Made From 12 × 18 Oaktag; Side One Becomes the Outside of the Folder, Side Two Becomes the Inside of the Folder. Set Photo by Donald Murray.

<p>A</p> <p>Addends #18 Area Model #49 Addition Matrix #58</p>	<p>B</p> <p>Base #56</p>
<p>C</p> <p>Composite Number #10 Coefficient #22 Coordinate Pair #23 Counting Trees #81 Circle #61 Constant #67 Commutative Property of addition #18 Commutative Property of multiplication #79</p>	<p>D</p> <p>Decimal #3 Denominator #11 Difference #13 Dependent Variable #26 Dimensions #18 Distributive Property #80</p>
<p>E</p> <p>Equivalent #9 Experimental Probability #49 Event #50 Equally Likely #52 Expected Value #53 Expanded form #109 Equation Model #91 Equivalent Expressions #85 Equation #86</p>	<p>F</p> <p>Fraction #1 Factorial #44 Fair game #57 Factored form #68</p>

FIGURE 1-5a The Front Cover of Caysa's Word Wall and a Page From Her Personal Vocabulary Showing the Indexing of Entries 49-52

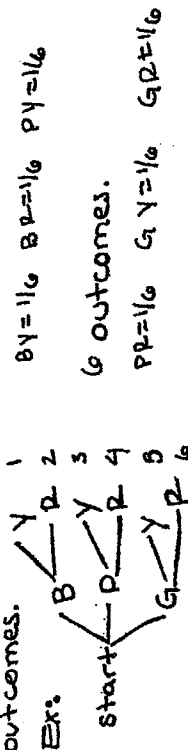
Vocabulary 49-52

49. Experimental Probability - a probability that is obtained by experimentation.

Ex: turn : 1 2 3 4 5 A = 2/6 B = 2/6
outcome: A C B B A C = 1/6

50. Event - a set of outcomes.

51. Counting Tree - a diagram used to determine the probability and the number of possible outcomes.



52. Equally Likely - when two or more events have the same probability of being chosen.
Ex: all of the outcomes in #51 are equally likely.

FIGURE 1-5a continued.

More review/preview activities and games

Bulletin Board Display

Focus Wall

The Focus Poster is part of a Focus Wall to be displayed as each topic is taught. The Focus Wall will address four aspects of the topic. Labels are in the TRB.

1. **Vocabulary.** "What" we say
2. **Understand.** "Why" the math works
3. **Problem Solving.** "Where" the math works
4. **Skills.** "How" the math works.

The poster will offer examples of the first two aspects, **Vocabulary** and **Understand**. Students will draw and/or write examples for the other two aspects, **Problem Solving** and **Skills**. They can post their work on the wall with the poster.

After students are introduced to new concepts and vocabulary, their knowledge is deepened through multiple, varied and rich experiences. Robert Marzano and other experts suggest practices to enhance learning that are based on current research on learning and the brain. Marzano's *last three Steps to Effective Vocabulary Instruction* help students **Deepen their knowledge over time both directly and indirectly through the most effective approaches, using multiple methods of instruction.**

4. **Students periodically do activities that help them add to their knowledge of vocabulary terms through repeated and varied exposures to the vocabulary.**
5. **Students discuss terms with one another.**
6. **Students periodically play games with the terms.**

Acquiring "Ownership" of Words

Developing understandings of word meanings is a long-term process that involves many encounters with both spoken and written words in varying contexts.

Nagy, Anderson, and Herman (1987).

Nagy and Scott (2000) identify several dimensions that describe the complexity of what it means to know a word.

- First, word knowledge is *incremental*, which means that readers need to have many exposures to a word in different contexts before they "know" it.
- Second, word knowledge is *multidimensional*. This is because many words have multiple meanings and serve different functions in different sentences, texts, and even conversations.

Example:

count – verb

1. to say numbers in order, usually starting at one
2. to add things up to see how many there are or to find the value of an amount of money
3. to include somebody or something in a calculation
4. to consider somebody or something, or be considered, in a particular way or as a particular thing
5. to be of importance or value
6. to have a specific value
7. to keep time by counting beats

count – noun

1. an act of saying numbers in order
2. an addition of people or things to find a total
3. a total that is reached by adding up
4. any one of a number of points, for example, in a discussion
5. a charge against somebody who is on trial
6. in baseball, the number of balls and strikes that a batter has accumulated during a turn at bat
7. a count to ten by the referee in a boxing match during which a boxer who has been knocked down must stand up or lose the match
8. a count to three by the referee at a wrestling match during which a wrestler being held on the floor must break the hold or lose the point

More review/preview activities and games

Clarify meanings

Clarify the multiple meanings and uses of terms

(e.g., plane, face, foot, unit, square, squared, count, rational, base, space)

• different spellings/meanings (buy/by, sum/some, whole/hole)

• more specialized terms (line, similar, irregular).

• Different uses of a term, such as square, line, circle.

Clues

Meaning of Multiplication

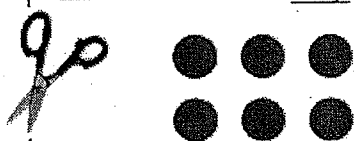
DEEPEN

EXPLORE

What is Glorietta Higgenbottom's Number?

Clue A

Glorietta's number is greater than the number of dots in this array.



What is Glorietta Higgenbottom's Number?

Clue B

Glorietta's number is less than the product of 3×4 .

$$\begin{array}{ccc} 3 & \times & 4 = \underline{\quad} \\ \uparrow & & \uparrow \\ \text{factors} & & \text{product} \end{array}$$

What is Glorietta Higgenbottom's Number?

Clue C

Glorietta's number is a product of two odd numbers.

$$\begin{array}{ccc} \text{odd} & & \text{odd} \\ \text{number} & \times & \text{number} = \text{product} \\ \uparrow & & \uparrow \\ \text{factors} & & \text{product} \end{array}$$

What is Glorietta Higgenbottom's Number?

Clue D

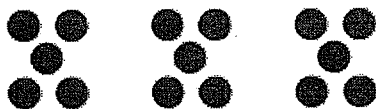
Glorietta's number is a factor of 18.

$$\begin{array}{ccc} \underline{\quad} & \times & \underline{\quad} = 18 \\ \uparrow & & \uparrow \\ \text{factors} & & \text{product} \end{array}$$

What is Gabby Higgenbottom's Number?

Clue A

Gabby's number is less than 3 equal groups of 5.



What is Gabby Higgenbottom's Number?

Clue B

When you double Gabby's number, the product has 2 digits.

$$\begin{array}{ccc} 2 & \times & \underline{\quad} = \underline{\quad} \\ \uparrow & & \uparrow \\ \text{factors} & & \text{product} \end{array}$$

What is Gabby Higgenbottom's Number?

Clue C

The only factors of Gabby's number are 1 and her number.

$$\begin{array}{ccc} 1 & \times & \text{Gabby's number} = \text{Gabby's number} \\ \uparrow & & \uparrow \\ \text{factors} & & \text{product} \end{array}$$

What is Gabby Higgenbottom's Number?

Clue D

When you multiply Gabby's number by 3, the tens digit is 1.

$$\begin{array}{ccc} 3 & \times & \text{Gabby's number} = 2 \underline{\quad} \\ \uparrow & & \uparrow \\ \text{factors} & & \text{product} \end{array}$$

Work with a group of 2-4 students. Pass out a set of four cards with top corners that match. Take turns sharing what your card says with your group. Work together to figure out what the Higgenbottom's number is.

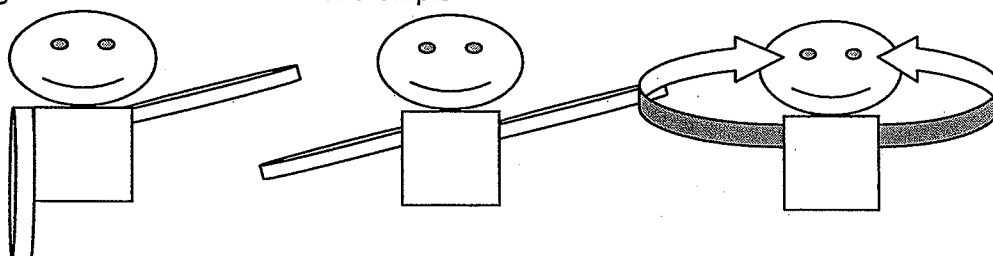
More review/preview activities and games

DEEPEN. Ongoing exploration of the terms, symbols, and concepts in the forms of engaging games and activities for the remainder of the year deepens and locks in students' understanding and knowledge. Whole group and small group games such as Charades, Quick Sketch, and Rapid Sketch are highly motivating experiences to increase students' awareness and appreciation of vocabulary and stimulates word fluency. Effective processing of the information occurs multiple times, detail is added with each new experience, and associations are made with other information. This ongoing activity in working memory allows vocabulary and concepts to reach permanent memory.

Charades

Non-competitive version for a quick check/review. This is a quick activity that can be done during a transition of subjects, before lining up for recess, lunch...

Ask students to stand next to their desks and use their arms, legs, and bodies to show they know the meaning of each term called out. For example:



Radius

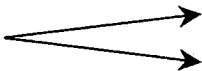

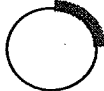

diameter

circumference

You might allow them to use props such as their desks, books, and pencils for terms like: perimeter, area, half, one-fourth, line, line segment, ray, angle, foot, inch, centimeter, yard, meter...

Charades with teams. You can make charades cards or have students create them for a certain topic or a compilation of different topics. Consider writing an informal definition or examples so clue giver focuses on the meaning of the word rather than syllables and spelling.

Charades

<p>acute angle</p> <p>An angle less than 90°.</p> 	<p>acute triangle</p> <p>A triangle with 3 acute angles.</p> 
<p>arc</p> <p>A part of a circle connecting two points on the circle.</p> 	<p>associative property of addition</p> <p>Grouping does not affect the sum.</p> <p>$(2 + 1) + 4 = 7$ $2 + (1 + 4) = 7$</p>
<p>commutative property</p> <p>The order of addends (or factors) does not affect the sum (or product).</p> <p>$2 + 3 = 5$ $3 + 2 = 5$</p>	<p>denominator</p> <p>The number below the fraction bar in a fraction.</p> <p>$\frac{3}{4}$ </p> <p>The total number of equal parts in all</p>

More review/preview activities and games

Quick Sketch

Quick Sketch (based on Pictionary game or *Win, Lose or Draw* TV game show) can be played with the whole class, small groups, or pairs of students in similar ways as you organize Charades.

Quick Sketch

factor The numbers you multiply to get a product.	perpendicular lines Lines that cross each other at right angles.
reciprocals Two numbers whose product is one. $\frac{3}{4} \times \frac{4}{3} = 1$	plane A flat surface that extends forever in all directions.

Cumulative Review Game

Rapid Chat

Materials

- Minute timer
- Cut out the six transparent "cards" Each card identifies a category and six related terms. Use one of the cards to model the role of the "Rapid Chatter." Have the other students be the guessers.

Directions (based on Taboo game, \$100,000 Pyramid TV game show, Fast Talk) This game can be played at a center with 2 players or a larger group. Directions for whole group game follow:
Separate the class into two or three teams. Teams alternate turns. The role of the "Rapid Chat" rotates among team members. The team "chatter" describes the first word on the list as quickly as possible to get "guessers" to say each word. The "chatter" quickly repeats the procedure for each of the other words on the card in order. The "chatter" may not use words on the card or rhyming words in their descriptions. The "chatter" can keep talking until "guessers" identify the term or they may move on to another term on the list. The round is over after one minute. The score for the guessing team is the number of words guessed correctly.

Transparency of Sample Vocabulary for Rapid Chat

Addition and Subtraction addend difference commutative property of addition associative property of addition sum identity element for addition	Place Value digit expanded form billion standard form period word form
Multiplication and Division factor product multiple quotient divisor dividend	Mental Math and Estimation estimate breaking apart rounding overestimate front-end estimation underestimate
Algebra variable equation inequality number expression algebraic expression unknown	Fractions, Decimals, and Percents numerator denominator decimal point mixed number improper fraction percent

As a whole group activity,

- One partner/team turns their back to the screen.
- Use the overhead projector to display the list of words.
- The other partner will look at the screen and give clues to the words and phrases that are flashed on the screen.

More review/preview activities and games

Distinguish between similar sounding words

Pronunciation and spelling can make a difference between one hundred and one hundredth. English learners in particular need to develop phonological distinctions between terms such as:

tens and tenths hundreds and hundredths sixty and sixteen

Small words can make a BIG difference

One small word, such as a preposition, can change the meaning of a phrase. The language of mathematics uses important symbols unique to that discipline.

Prepositions: The temperature fell:

- to 10 degrees • by 10 degrees • from 10 degrees

Understand and distinguish related terms that may not be identified as mathematics vocabulary, such as "tile" as a verb.

Another use of the word, "tile" commonly appears in perimeter problems. Students may be unfamiliar with the tile around a swimming pool.

Harold Asturias _ha_@berkeley.edu

- Third, word knowledge is *interrelated* in that knowledge of one word (e.g., *equal*) connects to knowledge of other words (e.g., *equation* *equilateral* *equivalent*)

Grade Level Vocabulary

The suggested teaching tips, activities and games fit in three categories: Preview, Introduce, and Deepen.

1. PREVIEW. In grades 3-8 mathematics programs more than 50% of the essential mathematics vocabulary for a given grade level is from previous years' curricula. See an example on the chart below. Reviewing vocabulary from previous year(s) serves as a preview of upcoming grade level work. Engage students in work and play with review/preview vocabulary in meaningful and fun activities such as Clues, Jeopardy, and Tic Tac Toe. Their involvement with review/preview terms, prior to new grade level work on the topic, will streamline the instruction of their grade level concepts and vocabulary.

Grade 4 Time Concepts

Review Previous Years			New Vocabulary for Grade 4	New Vocabulary Not Tested Nor Emphasized
Clock	Day	Ordinal numbers	Analog clock	Millennium
Hour	Week	A.M.	Digital clock	Decade
Minute	Month	P.M.	Quarter	Leap year
Second	Year	Half	Century	
			Elapsed time	

Selection of Related Vocabulary

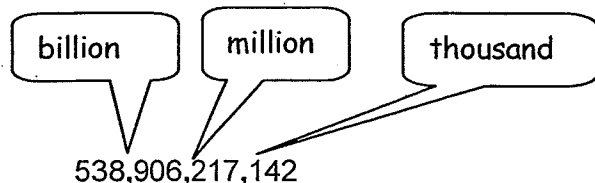
Effective vocabulary instruction isn't about looking up and memorizing terms. And the traditional terms alone are not the only vocabulary a student needs to succeed in math. Many terms have multiple meanings.

Students need to learn to distinguish among the different meanings. **Explore symbols unique to mathematics**

< ≤ > ≥ = ≠ + -

x • () as in $2(x + 3) = 2x + 6$ ÷ / (as in $1/2$) $\overline{\hspace{1cm}}$

' for foot and " for inches , as separator of "periods" (thousands, millions, billions). When you come to the , is when you say the name of the "period."



More review/preview activities and games

Preview

Whole class or small group game

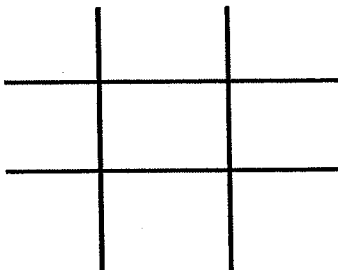
Three-in-a-Row

Mathematics Symbols **PREVIEW**

Math Symbols

> -
 ϕ X
 ' =
 " <
 +

Tic Tac Toe



is greater than	cents	foot (or feet)
inch (or inches)	plus (addition)	minus (subtraction)
multiplied by, or times	is equal to	is less than

Sample Copymaster Book Grade 4

Page 13

column, or in one of the two major diagonals.

Whole class or small group game

Multiplication and Division

Three-in-a-Row

Materials: Three-in-a-Row grid. Students can draw a "tic-tac-toe" on a piece of paper.

Directions: Announce each of the nine vocabulary words/phrases to the students.

Students record each vocabulary word in a cell of their grids.

1. Array
2. Commutative property of multiplication
3. Divisor
4. Equal groups
5. Factor
6. Identity element for multiplication
7. Multiple
8. Product
9. Quotient

Students write each term/phrase in one square of their boards. Once all terms have been recorded, the definition cards are read, one at a time. Students place an X on the word or phrase that matches the definition. The winner is the first player to get three Xs in a row,

Definitions

1. (Array) An arrangement of dots or objects in a rectangle with the same number of dots or objects in each row.
2. (Commutative property of multiplication) The property that states that the order of the factors does not change the product. It is also called the order property.
3. (Divisor) The number you are dividing by.
4. (Equal groups) Groups with the same number of dots or objects.
5. (Factor) One of the two numbers that are multiplied
6. (Identity element for multiplication) The identity element is 1. Multiplying any given number by 1 gives a product that is the given number.
7. (Multiple) A number that is the product of the given number and another number.
8. (Product) The answer in a multiplication problem.
9. (Quotient) The answer in a division problem.

Game for two players

Memory/Concentration (based on numerous commercial games and the TV game show)

Use 6-15 sets of two flashcards, one with the term or symbol, the other with a definition, explanation, example or drawing.

More review/preview activities and games

Deepen

Whole class or small group game

Cumulative Review

Million Dollar Math Pyramid

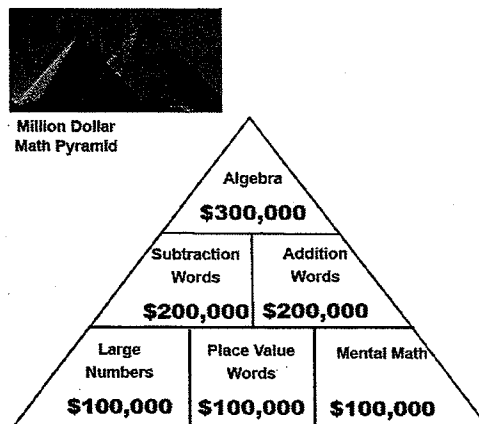
Sample Million Dollar Math Pyramid Game Poster

Materials:

- Pyramid Poster or transparency of the Poster
- Category Cards (sets of 6 cards) corresponding to units reviewed. Category cards are attached to the poster with paper clips. If transparencies are used, category transparent cards can be laid on top of the transparency pyramid.
- Sticky Notes to cover the category titles before their selection

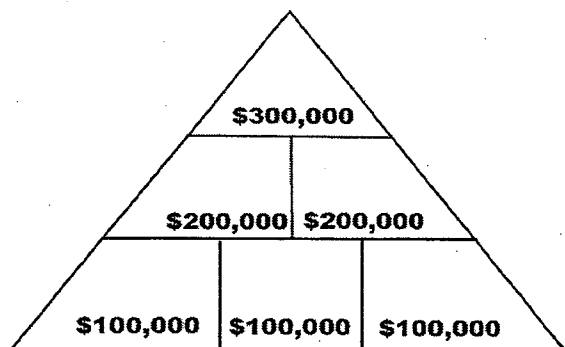
Directions (based on TV Show \$100,000 Pyramid)

This is a game for two teams. Each team chooses a "clue giver." Teams alternate turns. On a turn, the clue giver chooses one of the dollar amounts on the pyramid and peeks at the category without disclosing it to the other members of the team. The clue giver then presents "clues" about the nature of the category. Clues cannot be rhyming words nor contain any parts of the category words. Once the team guesses the category correctly, it is uncovered. The clue giver then peeks at another category and provides clues to that category. At the end of a round, as for example one minute, the team computes its score, which is the total of the amounts of money that have been uncovered. The clue giver on the other team then provides clues for the remaining categories. If the first team is able to uncover all categories in the time allotted, new categories can be placed on the pyramid. At the end of four rounds, the team with the greater amount of money is the winner.



Cumulative Review Game

Million Dollar Math Pyramid Games



Large numbers	Estimation	Money words
Place Value words	Number expressions	Computation method
Division (do not use "div" word)	Equation words	Comparing numbers
Computation words	Measurement	Addition Words
Multiplication words	Geometry	Algebra
Patterns	Fraction words	Graphic ways to show numbers
Subtraction Words	Graphing	Small numbers

More review/preview activities and games

Jeopardy is based on the TV game show. It is also available commercially on CD for a computer game.

Whole class or small group game Cumulative Review

Jeopardy

Jeopardy Category Answers to be placed in Jeopardy Chart are identified below. Correct questions for the clues are in parentheses.

Number

\$100 A number that names a part of a whole. (What is a fraction?)

\$200 Ten hundreds. (What is a thousand?)

\$300 A math sentence with an equals sign. (What is an equation?)

\$400 The operation that gives the product of two numbers. (What is multiplication?)

Geometry

\$100 A solid shape that looks like a ball. (What is a sphere?)

\$200 A four-sided figure with opposite sides parallel. (What is a parallelogram?)

\$300 A figure formed by two rays with the same endpoint. (What is an angle?)

\$400 A figure that is closed and has three or more straight sides. (What is a polygon?)

Measurement

\$100 A tool used to measure temperature. (What is a thermometer?)

\$200 The distance around a figure. (What is perimeter?)

\$300 A metric unit equal to 100 centimeters. (What is a meter?)

\$400 1000 grams. (What is a kilogram?)


Data

\$100 A graph that shows information with rectangular bars. (What is a bar graph?)

\$200 The difference between the greatest and the least numbers in a set of numbers. (What is the range?)

\$300 The number found by dividing the sum of a group of numbers by the number of numbers. This is also called the average. (What is the mean?)

\$400 The number or numbers that occur most often in a set of numbers. (What is the mode?)



Geometry	Measurement	Time	Fractions
\$100	\$100	\$100	\$100
\$200	\$200	\$200	\$200
\$300	\$300	\$300	\$300
\$400	\$400	\$400	\$400

More review/preview activities and games

Cumulative Review Activity

Jigsaw Activities

Materials

card decks of 16 cards. 4 different sets, 1 per unit

Directions

Give each group of two or three students one of the multiplication properties to study. Each group uses textbooks and other resources to study the property and prepares a presentation for the class. You may provide each group with materials that can be used as visual aids for their presentations, such as blank transparency sheets and overhead pens, or large pieces of paper with marking pens or crayons. If you have the technology, groups may wish to prepare PowerPoint presentations. Some groups may want to dramatize the property or create a dance to portray the property.



Sample Topic Cards

Commutative Property of Addition	Zero Property of Multiplication
Commutative Property of Multiplication	Distributive Property
Associative Property of Addition	Addition Property of Equality

Translate words into mathematical symbols, such as

Addition (+)	Translation
The sum of a number n and 5:	$n + 5$;
4 more than a number n :	$4 + n$.
3 plus some number n :	$3 + n$
Tim's first guess, n , increased by 2:	$n + 2$
Subtraction (-)	
The difference of two scores, m and n	$m - n$
3 less than Nancy's age, n .	$n - 3$
The train's speed, n , decreased by 5 mph.	$n - 5$
Multiplication (x)	
The product of two numbers, m and n .	$m \times n$
5 times the cat's weight, n .	$5 \times n$
Twice Bob's age, n .	$2 \times n$
$1/2$ of Maria's score, n .	$1/2 \times n$
Division (÷)	
The quotient of 12 and 3.	$12 \div 3$
3 divided into the total price, n .	$n \div 3$
The ratio of 10 to the number of students, n .	$10/n$
There are 12 shirts per team with n players.	$12/n$



Numbers & Computation



MATH WANTED POSTERS

These funny posters will put everyone on the lookout for math!

WHAT YOU NEED

- ◆ large sheets of poster paper
- ◆ markers or crayons

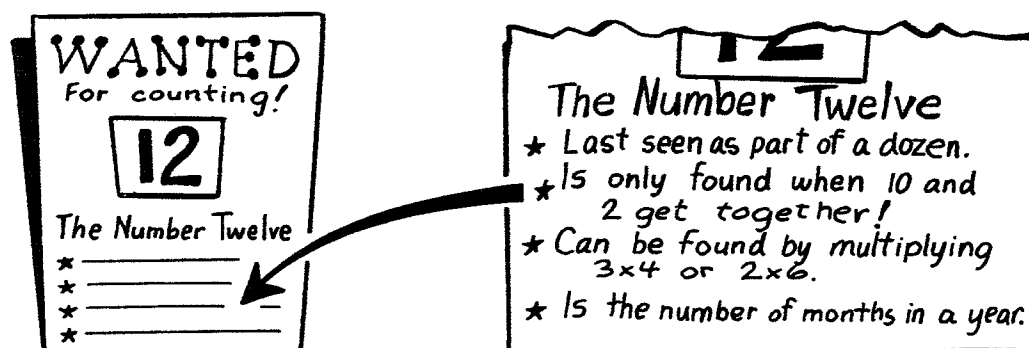
WHAT TO DO

Student Instructions / Teacher Notes

1. Choose a number or a math symbol (+, −, ×, or ÷) to be the subject of your Wanted poster. Describe your number or symbol on a sheet of scrap paper. You'll use these descriptions to help write your poster.

Here are questions students might answer to describe their numbers or symbols: What is it used for? What does it look like? When would someone need to use it? What are some math problems that use it?

2. Begin your poster by writing the word **WANTED** in big letters across the top. Underneath the word, write the reason your number





or symbol is wanted. Then draw a “mug shot” of your number or symbol and its name.

3. Fill out the rest of your poster with some of the descriptions you wrote on your scrap paper.

Encourage students to use funny sentences on their posters, and to think of as many ways as possible to describe their number or symbol.

When they have finished their posters, hang them up in your classroom or in a hallway so that others can enjoy them, too.

TIPS FOR A SUCCESSFUL PROJECT

- ◆ This is a project that works best with a model. Before students begin their posters, show them the photo on page 34, or create one of your own before class.

WANT TO KEEP GOING?

- ◆ Students may like to try creating posters for math areas (geometry, measurement, etc.), math tools (ruler, scale, calculator, etc.), or even the subject of math as a whole.

How many ways can you represent or say.....

[illegible]

<p>Alexander's Number</p> <p>Alexander's number is a palindrome, and the second and third digits are different.</p> <p>Help your group find out what Alexander's number could be.</p>	<p>Alexander's Number</p> <p>Alexander's number is prime and it's greater than one hundred.</p> <p>Help your group find out what Alexander's number could be.</p>
<p>Alexander's Number</p> <p>Alexander's number is odd, and the difference between the largest digit and the smallest digit is five.</p> <p>Help your group find out what Alexander's number could be.</p>	<p>Alexander's Number</p> <p>Alexander's number is less than one thousand, and the sum of its digits is 14.</p> <p>Help your group find out what Alexander's number could be.</p>
<p>Alexander's Number</p> <p>Alexander's number is not divisible by three, and it is less than 500.</p> <p>Help your group find out what Alexander's number could be.</p>	<p>Alexander's Number</p> <p>Alexander's number is a whole number with only two divisors: itself and one.</p> <p>Help your group find out what Alexander's number could be.</p>

Alexander's Number from Tim Erickson's "Get It Together": An example of a cooperative learning problem, from the number strand, that encourages and depends on vocabulary growth. Students working together on this problem encounter the following vocabulary, many times: *palindrome*, *digits*, *prime*, *odd*, *difference*, *less than*, *more than*, *sum*, *divisible*, *divisor*, *whole number*, *greater than*, *hundred* and *thousand*.

After each cooperative problem-solving session, a "sweep" is done around the room in which each student shares a mathematics term she or he has used. This provides reinforcement and closure. When small groups solve any kind of problem together, a spokesperson presents a group's solution to the class. This is another excellent opportunity to use math vocabulary.